



UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL



Distr.
GENERAL

E/ECA/HUS/37
June 1988

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

ORGANIZATIONAL NEEDS OF THE CONSTRUCTION
SECTOR IN THE PROVISION OF PRODUCTIVE
AND
SUPPORT SERVICES IN RURAL AREAS

LC/NAIROBI.

I. INTRODUCTION

1. The construction industry is the primary agent for the production of the physical, economic and social infrastructural facilities on which national economic development depends. In the rural areas, the roads, dams, irrigation canals, buildings for agro-based industries and storage facilities, all of which are necessary for the development of the agricultural sector, as well as the provision of shelter, schools, clinics and other community facilities, are all produced by this industry.

2. In spite of its key role in the promotion of economic development in both the urban and rural areas, the construction sector is characterized by low capacity and inefficiency caused by a number of factors which are well documented. 1/ Prominent among these are the frequent shortages of building materials; overdependence on imported inputs - materials, equipment, skills; low productivity resulting, inter-alia, from inadequately trained craftsmen, poor supervision and management practices, use of obsolete plant and equipment and poor maintenance practices.

3. About 70 per cent of the population in Africa live in the rural areas. In some countries like Ethiopia and Malawi, it is 90 per cent. The rural economy in African countries is basically agricultural and generates the primary export crops, which in most countries constitute a significant proportion of foreign exchange earnings. It also produces the bulk of the food crops consumed in the urban areas. It is often claimed that the rural areas produce much of the national wealth which, in turn, is used to develop infrastructures and provides a relatively high quality of life to the one-third of the population living in the urban areas.

4. The sharp contrasts in infrastructure provision between urban and rural areas in Africa is well known. The road network in rural areas is poorly developed and for many rural communities, accessibility to markets and service centres is problematic. Accessibility to social services like health and education is generally poor. Shelter is constructed in unimproved local materials with low durability and for many settlements, a basic amenity like latrines is virtually non-existent.

5. There is however increasing concern, globally and indeed in African countries, over the plight of the rural communities. The programme of action of the World Conference on agrarian reform and rural development called on governments, in their strategies to develop non-agricultural activities in rural areas, to consider, inter-alia, action to allocate to rural areas a greater share of public utility and other infrastructure, particularly health services and education, water, power, roads transport and communication. 2/ More recently, the African Priority Programme for Economic Recovery (1986-1990) focused attention on the improvement of rural infrastructures concerning mainly "feeder roads, storage facilities, irrigation facilities, and rural amenities and services such as rural health, education, water supply and information".

6. This renewed emphasis on the development of rural infrastructures and services will result, increasingly, in projects that the construction sector will be called upon to undertake. There is therefore the need to review the problems facing the sector, particularly in respect of its organization and operations in rural areas in order to meet the challenges of increased projects in such areas.

7. Chapter II of the document assesses the need for the provision of infrastructures which are required for productive and support services in the rural areas and discusses the appropriateness of current design concepts to rural projects. Chapter III discusses the role of the construction sector in the creation of these infrastructures and reviews the problems of construction in the rural areas. In the light of the foregoing, chapter IV outlines aspects of an approach to the organization of the construction sector for more efficient project implementation in rural areas. Finally, chapter V outlines the responsibilities of African governments, regional and international organizations in enhancing the successful application of this approach.

II. PROVISION OF PRODUCTIVE AND SUPPORTIVE SERVICES IN RURAL AREAS - the need

The need for productive and support services in rural areas

8. Since the rural economy in African countries is predominantly based on agriculture rural development strategies have very often focused on measures for modernization of agriculture and increased agricultural output. Other concepts of rural development find their bases in rural industrialization or the development of basic economic and social infrastructure. Irrespective of the emphasis in rural development philosophies, the provision of economic and social infrastructure constitutes a key link in the development process. For example the World Conference on Agrarian Reform and Rural Development observed that a vital and integral part of rural development was the promotion of non-farm activities which provided new employment and created necessary social and technical infrastructure and helped to reduce both rural exodus and growth of urban slums. 3/

9. It is generally accepted that road construction is one of the key catalysts for inducing rural development, together with among other things, the provision of water, health and educational services. Investments in road construction have led to increased agricultural production, resulting from reduced transport costs, access to markets and to cheaper agricultural inputs. 4/ Better roads increase frequency of visits by health workers and improve access to medical facilities in neighbouring towns. A study of the impact of rural penetration roads in Sierra Leone concluded that

"the roads have led to more frequent extension agent visits, increased traffic and transport services, high quality cement construction, more purchase of consumer goods and more health services in villages served by the roads. In addition, there are indications that ... the roads have played some role in facilitating fertilizer use; in bringing about wider cultivation and marketing of cash crops; expanding commercial activity and in increasing educational opportunities". 5/

10. In spite of their role in promoting rural development, the rural road networks, particularly the feeder and access roads, are poorly developed in African countries. One consequence of this is that rural dwellers have limited access to passenger transport facilities. A survey in Kenya, for example, revealed that over 90 per cent of trips were on foot, 4 per cent by bicycle, 2 per cent by paratransit services and only 0.5 per cent by bus. 6/ Poorly developed feeder road networks also affect food and cash crop production because of difficulties in moving the produce to market centres. Other negative impacts include poor access to social services such as health and education.

11. In addition to the deficiencies in the provision of roads, there are also great needs in the provision of social infrastructure. For example, WHO has estimated that in the rural areas of some Sahelian countries only between 5 per cent and 15 per cent of the population have access to drinking water and less than 5 per cent have access to any form of excreta disposal facilities. 7/ In 1983, about 29 per cent of the rural population in East Africa had access to safe drinking water and the sanitation coverage was about 18 per cent on the average. 8/ In Ethiopia only 7 per cent had access to protected water, 10 per cent to latrines and 3 per cent to refuse disposal facilities. 9/

12. The backlog, as well as current needs for the provision of health and educational facilities is also great in African countries. And these are essential for the achievement of an improved quality of life for the rural population.

13. Programmes for the improvement of rural conditions have been receiving increasing attention and already, in a number of countries special ministries or departments responsible for rural development have been set up. Measures for improved agricultural output through increased production and reduction of post-harvest losses call for infrastructures such as irrigation facilities and storage facilities (silos, sheds, etc.) Agricultural resettlement schemes will call for the provision of shelter and other community facilities. The promotion of agro-based industries is of priority concern in African countries. Improvement of feeder road networks also features in rural development programmes. The creation of all these infrastructures is ultimately the responsibility of the construction industry.

The development of economic and social infrastructure in urban and rural-areas

14. There is clearly an imbalance in the distribution of infrastructural facilities between the urban and rural areas in Africa which can also be found in other developing regions of the world. While there are good reasons for large investments in urban infrastructure, this prevailing situation in which the rural areas are poorly served is a major contributor to the rural-urban population shift.

15. There is a high concentration of population in the urban areas and particularly in capital cities. In 10 African countries (Angola, Benin, Guinea, Kenya, Libya, Mozambique, Senegal, Tanzania, Togo and Uganda) more than half and up to 83 per cent of their urban population are concentrated in the largest city. In thirteen other countries at least one-third of the population live in a single city. 10/ Much of the production of goods and services is also concentrated in the urban areas. It is estimated that in the majority of African countries, more than 65 per cent of total national production can be attributed to urban areas. 11/

16. A large network of facilities - roads, water supply, drainage, electricity, schools, hospitals, etc. is required to support the large population concentrations and economic activities. As the population increases and the level of service provided by the existing infrastructure deteriorates, there is pressure to make further investments. Slums and squatter settlements develop and upgrading programmes involving the improvement of shelter and the provision of access roads, water, latrines, etc. are initiated (for example, site and services schemes).

17. Problems relating to infrastructure in urban areas, and especially the capital cities, tend to naturally receive the priority attention of governments because of their strong political base and the existence of strong interest and pressure groups. The problems are also conspicuous to policy and decision-makers who are themselves affected by the overcrowding on the streets, poor street lighting, insanitary conditions, etc.

18. Investments in social and economic infrastructure in the rural areas of Africa have not been commensurate with the needs. And the needs are great, as outlined in the preceding section. The renewal of commitment by African governments to the development of rural areas should lead to a gradual redressing of the imbalance that has characterized the provision of infrastructures viz-a-viz the urban areas.

Appropriateness of design concepts to rural areas

19. Present designs for projects in rural areas do not often take account of the peculiar situation and circumstances of such areas with the result that the infrastructure components of rural development projects have relied on standard equipment-intensive technologies even when concern for rural unemployment would have made the use of labour-intensive technologies more appropriate. 12/

20. This continued conservatism in design may be attributed to a number of factors, including the following:

- (i) lack of information on, and training in innovations in construction techniques with emphasis on locally available inputs;
- (ii) tendency to view as backward, designs which rely on labour-intensive construction techniques;

- (iii) lack of local initiatives in research adaptation of proven experiences in other developing countries concerning innovative construction materials and techniques;
- (iv) shortage/absence of personnel or contractors capable of undertaking constructions based on innovative designs, for example, with emphasis on labour intensive techniques.

21. As will be shown in the next chapter, the rural areas of Africa are disadvantaged in the implementation of construction projects because of shortages of conventional materials and skilled workers, and poor access to construction equipment as well as equipment repair facilities. In this context therefore, it appears logical to advocate for a rationalization in design principles to ensure better success in implementation.

22. It is important, however, to be aware of the consequences of the application of new technologies in the construction process in order to avoid difficulties at the implementation stage. For example, in the implementation of the Kenyan rural access roads programme which was based on labour intensive techniques, the following initial problems were identified: 13/

- supervisors were not trained to organize labour;
- payment systems could not accommodate large groups of casual labour;
- procurement systems were not adapted to the purchase of good quality hand tools; and
- no productivity data existed on the output of labour.

23. However these problems were overcome with time after the necessary measures had been taken and experience from the project has shown that "Labourbased techniques could be used on a large scale for the building of roads, that they could achieve a good standard, that they were inexpensive and that overall output could be maintained at a reasonably high level". 14/

24. The adoption of innovative designs, when appropriate, is therefore not only logical from the point of view of optimizing the use of locally available inputs and depending less on imported items, but it could also lead to a lowering of construction costs, and increase non-farm employment opportunities in the rural areas.

III. THE CONSTRUCTION SECTOR AND THE CREATION OF PRODUCTIVE AND SUPPORT SERVICES

25. The rural economy in African countries is based primarily on agriculture and therefore the development of agricultural penetration or feeder roads, irrigation systems, farm structures and storage facilities constitute an essential component of rural development programmes. The provision of social facilities such as schools, health centres and clinics, and community centres is also accorded high priority.

26. All these infrastructures and facilities are created by the construction sector. The performance of this sector in rural areas is however affected by a number of factors which are related to inherent problems of the sector itself and also to the peculiar conditions in rural areas. Some of these factors are discussed in the following sections.

(a) Organization of project planning and implementation

27. The principal actors in the planning and implementation of projects are the employer (client), the designer (engineer or architect), the quantity surveyor, other consultants (for both design and supervision), and the contractor. There are established models for project preparation and appraisal, tendering and award of contract, and supervision which vary among African countries depending on past colonial links. However, the principal actors remain the same. The actors in between the client and the contractor may or may not belong to the same firm or consulting group.

28. The contractor usually comes into the picture at the tender stage and therefore exercises little influence on the design specifications which have definite consequences on the building materials and construction techniques to be utilized. A system for involving the contractors at the design stage could have distinct advantages for successful project implementation. The contractor would have the opportunity to make available to the design team his knowledge of alternative materials and methods of construction to guide the selection of those that are appropriate to the project on hand. His accumulated experience would also be useful in developing and defining detailed plans and specifications. These considerations would be most beneficial to projects in rural areas where problems in obtaining conventional building materials, equipment and skilled labour are magnified several times.

29. Organization of the planning and implementation of projects often takes place at different levels in a country. Firstly, there are projects planned at the national level by a ministry either directly or through a parastatal under the ministry, for example, roads and bridges, dams, water supply schemes, irrigation schemes, etc. The design for these projects, is generally carried out at the head office of the ministry based in the capital. For minor projects, however, designs could be carried out at the regional (sub-national) office of the concerned agency, if the requisite expertise is available. Supervision of the projects is organized directly by the head office or may be undertaken by the regional office with occasional visits by head office staff.

30. A second category of projects comprises those initiated at the regional (sub-national) level either by the regional administrative office or by regional branches of infrastructural development agencies. Responsibility for the design of such projects would normally be assumed by the concerned regional branch office, but depending on the level of decentralization practised in the country, the designs would have to be approved by the head office. The award of contract and project supervision would normally be carried out by the concerned regional office. To forestall abuses of established procedures, contract awards and payments to contractors are supervised by a regional tender board.

31. The third category of projects involves those which come under the ambit of district/local councils or authorities. These would include projects like construction of market stalls, small community buildings (post office, community centre, public latrine, etc.) storage sheds for farm produce, etc. In some countries, the major infrastructure agencies responsible for roads, water supply, electrical power supply, public works, etc. maintain offices at the district level and their staff provide technical services to the district council. Capacities may therefore exist at this level for the design of projects as well as their supervision. Otherwise assistance would be sought from the regional office.

32. Parastatals which act as consultants to the government for organizing the design and supervision of certain categories of construction projects having a specified minimum value have been established in some countries. Government agencies are permitted, under this arrangement, to assume responsibility for the design and supervision of only projects of values below the specified minimum. In other countries the public works ministry or department provides consultancy services to the government for construction projects.

33. For all the categories of project planning and implementation cited above, there is a tendency in many countries for overcentralization of contract administration with the result that payments for completed works, even when processed at the district or regional level, are effected at the national capital. This is due partly to the shortage of funds in the national treasury which means that funds may not be available at a specific time though a project has been provided for in the national budgetary allocations. Even though some contracts carry penalty clauses for delayed payments by the client, contractors are often reluctant to evoke such clauses probably for fear of victimization in future contract awards. For a small contractor operating in the rural area, the complex administrative procedures and the concomitant payment delays exert serious consequences on his activities to the extent that he may just manage to break-even on a number of projects, or may have to abandon some projects which in the end affects his performance record.

34. While problems faced by the small-scale contractor are not unique to him, being the result of an established structure which needs review, some discriminatory measures may be worth considering, not only to help build up this category of contractors, but also to enhance the successful implementation of infrastructural and social services projects in the rural areas. Some of the measures which could be considered for application in African countries are discussed in chapter IV.

(b) Assessment of construction capacity

35. The availability of an adequate number of construction firms with the requisite capital base, equipment, skills and experience to undertake planned construction projects is crucial for successful project implementation. With respect to projects located in rural areas, there is an additional requirement: the willingness of construction firms operating mainly in cities and large towns to accept to undertake them.

36. The failure to implement development projects in many countries has been attributed by governments, to inadequate capacity in the construction sector.

Size and nature of construction firms

37. The majority, more than 50 per cent, of locally registered contractors may be classified as small size firms with capacity to undertake minor construction projects. For example in 1983, 65 per cent of registered contractors in Tanzania were classified as small firms. These firms had, on the average, a turnover of Tsh 1.5 million, with a staff of 50 including four professionals and equipment comprising one tipper, one pick-up, one mixer and one block making machine. On the other hand, contractors classified in the highest category, with capacity to undertake very major projects, constituted only 9 per cent of the total. They had an average turnover of Tsh 25 million and around 600 staff including five engineers and 20 other professionals and foremen. 15/

38. Because of the small number of highly qualified contractors, there is a tendency often to have some of them handling more projects than their available resources would permit them to cope with efficiently. Another consequence of this situation is that for larger contracts the few qualified firms command high prices, a phenomenon which has contributed to high annual increases in prices.

39. As a result of their limited expertise and equipment holdings even the large scale local construction firms are often not able to cope with the requirements of major projects including dams, large irrigation schemes, roads and complex structures. Contracts for such projects are therefore often won by foreign firms, sometimes in partnership with local firms.

40. Small construction enterprises are usually more adversely affected by the problems which are generally faced by contractors. For example, the ILO study cited above found that smaller contractors reported major financial problems twice as often as the larger contractors. In fact the smaller contractors were found to be more strongly disadvantaged when the proportion of credit they were allocated was compared with their proportionate contribution and total construction turnover. In proportion to turnover, small and medium-scale contractors received about three and half times less credit than larger contractors. The study concluded that unless moderate amounts of both foreign exchange and credit could be made available for the renewal of equipment, particularly for small and medium-scale contractors, there was a risk that overall capacity of the local construction sector could fall excessively in succeeding years.

41. Small contractors tend to be more labour-intensive than their larger counterparts and are therefore more amenable to the use of intermediate technologies, as has been suggested previously, for adoption in rural projects. In fact, even though statistics are not available, experience in many African countries would tend to show that small contractors are more attracted to rural-based projects than other contractors, probably because of: the size of the projects, difficulties in competing for jobs in urban areas, and the tendency of the larger contractors to concentrate their limited resources on projects in urban areas. The development of local construction capacity as a means of enhancing project implementation in rural areas should therefore focus more on the small-scale contractors.

Location of construction firms

42. Most construction firms are based in the cities and large towns with the capital usually accounting for a disproportionately high percentage. Again, using information on the construction industry in Tanzania, it was found that in 1983, about 54 per cent of all registered contractors had their base in the capital, Dar-es-Salaam. In the higher category of class 1 or class 2 contractors, as many as 70 per cent were based at the capital. Even though data from other countries are not available the situation is not likely to be significantly different from the picture portrayed above.

43. Thus outside the capital city there are fewer construction firms, predominantly in the small- to medium-scale categories. Contractors tend to have greater interest in tendering for projects in the regional capitals and other large towns than in rural locations far away from the urban centres. The several problems relating to building materials, equipment maintenance and skilled labour force are magnified in the rural context and small contracts involving, for example, the construction of school blocks and clinics are often taken up by small firms which are unable to win contracts in urban areas and are willing to utilize such jobs to build up their experience and capital. Projects for the construction of feeder roads and small agricultural settlements schemes are also likely to interest only contractors in the small- to medium-scale categories.

44. Apart from district centres where some small contractors may be headquartered, it would generally be difficult to find any such contractors in the typical rural area, purely because of economic considerations. It is possible however to find a few skilled workers like carpenters or masons who operate on parttime basis, sharing their time between farming activities and housing construction.

(c) Problems of project implementation in rural areas

45. The implementation of construction projects for the provision of infrastructural and service facilities in rural areas poses special problems for contractors who are based mainly in the cities and major towns in the countries of the region. These problems, including those discussed below, explain to a large extent, the reluctance of many contracting firms to undertake projects in rural locations. A careful analysis of the problems is however necessary if suitable measures are to be developed and implemented to ensure that projects aimed at promoting economic development and generally improving living conditions in rural areas, can be undertaken without undue hindrance.

Shortage of conventional building materials

46. This is a common problem in the construction sector as a whole in most African countries but assumes even more serious proportions in a rural context given the characteristics of building materials supply. In many countries, materials such as ordinary portland cement, steel and metal roofing sheets are imported and thus their supply is determined largely by the foreign exchange

position of the country. Even for materials which are produced locally either from imported inputs or essentially locally available raw materials, experience shows that production is concentrated in a few locations close to the large population centres which provide the biggest markets for the products of the plants. Because of poor transportation networks the normal distribution system for building materials favours the large centres which are usually more accessible and account for the highest proportion of the important building and civil works.

47. In order to introduce rationality into the distribution system and ensure equity and judicious use of scarce building materials, some countries have set up institutional arrangements for this purpose. For example in Tanzania, the Building Hardware and Electrical Supplies Company (BHESCO) was established by the Government in 1973, among other things to

- (i) handle the importation of goods that will be confined to it by the government from time to time, and
- (ii) distribute the goods thus imported equitably taking into consideration the relevant elements pertaining in each region (sub-national).

BHESCO distributes the imported materials essentially under three main categories:

- (i) percentages have been established for each Regional Trading Company to cater for regionally financed projects, and also for individuals;
 - (ii) a portion of the materials is earmarked for contractors undertaking national projects all over the country;
 - (iii) the third category of allocation serves government departments, parastatals, diplomatic missions and large manufacturing firms.
- 16/

48. Theoretically, such practical distribution arrangements should help to ensure that projects in the rural areas receive a fair share of the available building materials. Experience in many countries, however, points to the contrary. Apart from the transportation problems referred to above, there is also a problem of ensuring that diversion does not occur and that materials allocated to specific projects in the rural area get to the construction sites. Contractors are usually keen on devoting more attention to the timely completion of projects in the cities and other urban areas and are therefore likely, in a situation of insufficient supplies, to divert their building materials allocations to such projects.

49. A small contractor operating in the rural area has to contend with another problem related to building materials supply. Because of chronic shortages of materials, a black market often develops and some big construction firms supplement their official allocations with purchases from the black market to ensure continuity of work at their sites so as to minimize idling time of the labour force. The small contractor however lacks the capital to buy from the unofficial sources where prices could be more than twice the official price.

Shortage of skilled personnel

50. Construction is basically a labour-intensive activity, and labour constitutes the second largest single component of resources required by the construction industry, after building materials. The industry thus tends to attract a large proportion of unskilled labour, including temporary and seasonal labour. In spite of the abundance of manpower resources in African countries skilled and professional labour in the construction sector is very scarce and in some countries construction labour has to be imported.

51. Two main factors account for the shortage of skilled labour: the absence of, or inadequacy of training programmes and poor remuneration. Many countries have vocational training institutes to train carpenters, masons, painters, plumbers, steel benders, electricians, etc. but their output does not match the needs. For example, in 1981 valid application forms were received from 15,072 candidates for entry into the five training centres under the National Vocational Training Division in Tanzania, while there were only 1,412 places available. 17/

52. The system of apprenticeship which operates in the informal sector is another source of supply of artisans to the construction industry. This system, which is founded on the principle of on-the-job training, is generally unstructured and the period of training required to achieve a basic level of proficiency depends on the trainee's abilities and motivation. Figures on the proportion of skilled construction labour trained through this informal system are not readily available but the indication is that in some African countries it is significant.

53. Because of poor remuneration a number of skilled labour are lost to other countries, industries or firms. In fact local contractors sometimes lose most of their skilled labour to foreign contractors operating in the countries because of better salaries and incentives paid by the latter. The cyclical nature of jobs in the construction industry and the relatively low wages also combine to create a situation where some skilled workers opt for self-employment. For many, this form of employment is very rewarding when there is a lot of private construction activity, especially in the informal sector.

54. With the constant rural-urban migration caused, in part, by fewer job opportunities in the rural areas, the shortage of skilled labour is more acute than in urban areas. Artisans who acquire training through the informal sector drift to the urban areas in search of better opportunities. Contractors are therefore often obliged to attract such labour from the urban areas to projects in the rural areas. This may necessitate the payment of special incentive allowances and the search for accommodation in nearby villages or alternatively, the provision of camping facilities. For the contractor who is unable to anticipate such a situation and the associated additional costs so that they would be reflected in the contract sum, this expenditure will constitute a loss.

Unavailability of equipment and parts

55. Next to the shortage of building materials, the unavailability of equipment and spare parts constitutes the second major problem faced by contractors in many African countries. The foreign exchange shortage experienced by the

countries makes it difficult to purchase new plant, equipment and vehicles. Difficulties in obtaining much needed spare parts often leads to cannibalization of some equipment in order to maintain others in good operating condition. The problem is worse for the smaller contractors who usually have a weak capital base and have poorer access to credit than the larger construction firms.

56. With the exception of the large firms which would have basic equipment, albeit aged and of low productivity, most of the contractors which would be attracted to projects in the rural areas have very few equipment of their own and therefore depend on plant hire services for their needs.

57. Due to the age and serviceability of most of the equipment available for hire, frequent breakdowns are experienced which in a rural area presents serious problems to the contractor. The nearest repair facilities or expertise may be several kilometres away, while the required spare part, if available in the country, may be found only in the capital city. Returning broken down equipment into service may therefore take several days.

58. Shortage of serviceable equipment and the absence of repair services therefore constitute a serious problem to small- to medium-scale contractors who operate in the rural areas. This problem combined with the frequent shortages in the supply of essential building materials underlie the reluctance of contractors to show enthusiasm for projects in rural areas.

Infrequent visits by officers of implementing agency

59. Supervision of construction projects by the implementing agency (client) or a consultant acting on its behalf, is important for a number of reasons. Firstly, it helps to ensure that the contractor complies with the design drawings and specification for materials and components, and that adequate quality control procedures are being applied on site. Secondly, questions arise during construction about design details and specifications which require clarification to enable the contractor to proceed. Sometimes in the light of specific site conditions which could not be foreseen at the project preparation stage there is need to effect changes in the design. For very important projects several decisions on the design and techniques adopted by the contractor are taken throughout the duration of the project. Frequent interaction between the contractor and technical representatives of the client is therefore an essential ingredient for successful project implementation.

60. For major projects of high value, both in the urban and rural areas, the client is often represented on site by a resident consultant. However, for small projects supervision is carried out by non-resident professionals who are responsible for several projects and other duties concurrently. Some projects in rural areas are therefore visited only occasionally at the time when measurement of work done is undertaken to prepare payment certificates. Under such circumstances, the contractor is obliged to use his discretion if he has sufficient technical knowledge, in the interpretation of design specifications, or to travel to the offices of the implementation agency in the district or regional capital for consultations.

61. Another aspect of this situation which confronts contractors executing projects in rural areas is that it can take a long time to have an officer from the implementing agency to come to the site for valuation of completed works. The resultant delays in payments, which are exacerbated by cumbersome administrative procedures have a negative effect on the contractor's cash flow position and finally lead to extended contract periods and cost over-runs.

IV. AN APPROACH TO THE ORGANIZATION OF THE CONSTRUCTION SECTOR FOR PROJECT IMPLEMENTATION IN RURAL AREAS

62. The discussions in the foregoing chapter have highlighted the existing deficiencies in the construction sector in African countries which culminate in problems of project implementation, especially in the rural areas. Lack of financial resources, both foreign and local, constitutes a major bottleneck to the achievement of high performance in the sector. Other problems faced by the sector are however mainly related to its present organization which favours the activities of large construction firms to the detriment of the smaller ones which are more disposed to accepting projects in the rural areas. Some of the issues concerning the creation of a conducive environment for improving the delivery of construction output in the rural areas are outlined below.

Provision of incentives to contractors for projects in rural areas

63. A number of factors, as outlined above in chapter III, sometimes make it unattractive for many contractors, to undertake construction projects in rural areas. Of course, in a situation where there are fewer jobs on the market than the available capacity, some contractors would be forced by circumstances to accept such projects. But even in such cases, project implementation would not be made any easier if the inhibiting factors continue to operate.

64. While it is obvious that the problems of project implementation in rural areas in a broader sense reflect the situation in the construction industry as a whole, there is need to minimize them in order to ensure the early completion of projects which have the objective of helping to improve the living conditions of the majority of the population who are deprived of many basic amenities and therefore live in abject poverty. Among the measures that could be taken to encourage contractors to operate in rural areas are the following:

- (i) ensure an adequate supply of essential building materials to rural projects; this may mean using discriminatory practices in the materials distribution system;
- (ii) facilitate the processing of claims and early payment for completed works;
- (iii) give priority in the award of contracts for rural projects to contractors based at district centres;
- (iv) for rural projects with external financing, make provision for the supply of basic construction equipment to participating contractors;

- (v) organize training for contractors in new techniques for rural projects, for example, the use of labour-intensive techniques in road construction, within the framework of the project implementation process. This (and also iv) has been done in some rural road improvement projects funded by the World Bank.

Development of decentralized construction capacity

65. In tandem with efforts to create incentives so as to make it attractive for urban-based contractors to accept jobs in rural areas, attempts should also be directed at creating decentralized construction capacity at the district and local levels.

66. The concept of decentralization of political administration as well as regional development planning is gradually gaining acceptance in some countries of the region. Promotion of the development of decentralized construction capacity to handle at least non-sophisticated and simple construction projects at the district and local level should be given priority attention in these decentralization programmes. The use of contractors operating from the district/local level would have advantages, including the following:

- (a) familiarity with local situation regarding labour, equipment and materials which should help in organization of construction works;
- (b) familiarity with, and accessibility to district/local authorities thereby facilitating decisions on implementation details including clarification of questions concerning design specifications, and supply of essential building materials distributed through official channels;
- (c) facilitation of communication channels between contractor's site management and the head office enhancing decision-making on matters affecting site operations.

67. Attention should be focused on small-scale contractors. In addition to improving their access to credit, they should be assisted in acquiring the necessary technical and managerial skills to run successful businesses. Training in how the construction process is organized, and in tendering procedures, preparation of claims, organization of site activities and labour, and in basic accounting skills will greatly improve their efficiency.

68. While it is clear that the development of construction capacity at the district/local level would promote better implementation of construction projects in rural areas, it is important to sustain these capacities by ensuring a reasonable market for projects which would enable the contractors to retain the services of their experienced skilled workers. This is crucial because contractors would be encouraged to locate in such areas only if they can be assured of the profitability of their operations, and one factor in this is the probability of securing contracts which might be better, depending on their expertise, if they are based in the urban areas.

Creation of technical capacity within district/local authorities

69. The centralization of technical expertise at the national and regional headquarters of government agencies responsible for the design and supervision of the construction of infrastructural facilities in rural areas sometimes leads to implementational bottlenecks. The creation or provision of technical expertise in areas relating to infrastructure and services within district/local authorities would not only facilitate the resolution of problems concerning interpretation of design details and specifications which may face contractors at works sites in rural locations, but would also have the following advantages:

- (a) better supervision of construction works which will minimize incidents of shoddy final output;
- (b) promotion of designs that are appropriate to the local situation in terms of availability and quality of contractors, labour, equipment and also building materials;
- (c) facilitation of regular measurement of work completed by the contractor and preparation of claims to ensure timely payments which would minimize the contractor's cash flow problems.

70. The shortage of qualified professional staff in many countries constitutes a bottleneck in fully implementing such a measure in the short-term but action should be initiated towards that end. Attempts have already been made in some countries in this direction. For example, in Ghana, the district office of Public Works Department is mandated to provide technical backstopping to the District Council.

Application of appropriate project designs

71. Project design greatly influences its implementation and affects the materials and techniques employed as well as the skills and expertise required. In a situation, as those prevailing in many rural areas in African countries, where the available labour is largely unskilled and imported materials are often in short supply, an appraisal of design concepts for infrastructural and services projects is required.

72. There should be a deliberate effort to design projects with emphasis on the utilization of locally available building materials and specifying the use of construction techniques which would permit the employment of a large labour force with generally low skills but without sacrificing the quality of the end product. This new emphasis in project design would not only help to improve the rate of project implementation but would also help in:

- (a) reducing project costs through the use of less expensive materials whose better supply would also reduce idle time at work sites caused by shortages in the supply of conventional building materials;
- (b) developing the capabilities of construction firms at the district/local level by providing opportunities for them to undertake projects based on simple construction techniques;

- (c) providing employment for local labour whose skills would be developed on the job to be applied to more difficult tasks on future projects;
- (d) building up a body of design concepts and principles which are responsive to the local technical, economic and labour situation, thus contributing to the attainment of self-reliance in the designing and implementation of construction projects, particularly in the rural areas.

73. Labour intensive techniques have successfully been used in the construction and maintenance of rural access roads in Kenya and the experiences gained have been employed by the ILO in similar projects carried out in other countries including Ethiopia, Botswana, Mozambique and Ghana.

Development of decentralized facilities for the supply of construction inputs
Plant and equipment

74. There is a general shortage of plant and equipment particularly for construction works requiring large quantities of earthworks. The problem is less acute for building works in rural areas for which the main equipment may be concrete mixers, vibrators, dumpers and tipper trucks.

75. In order to encourage contractors, especially those in the small-scale category, to undertake projects in the rural areas, it is important that governments consider alternative schemes to increase access to basic construction plant and equipment. In this connection, plant hire facilities have been established in some countries (for example Ghana, Kenya, Swaziland). Most of these facilities are operated from centralized locations without sub-national linkages to the regional or district level. Whilst there is keen competition for the limited plant and equipment available, there is also a tendency for preference to be given to contractors with projects in nearby locations in order to facilitate maintenance and repair services.

76. Even though the establishment of plant hire facilities require large foreign exchange expenditure African governments should give consideration to the pursuit of a systematic programme to create facilities and services at the sub-national level. The viability of such a scheme would however depend on the level of construction activity in the different regions of the country. In any case, a regionalized plant hire service based on a limited number of basic equipment such as graders, rollers, bulldozers, concrete mixers and vibrators would help greatly in promoting the implementation of construction projects in rural areas. More sophisticated or specialized equipment could be stocked only at centralized locations.

77. There are private entrepreneurs in some countries who operate plant hire services. In most cases, however, they need assistance to renew their stock of equipment and maintain a high level of serviceability. Many indigenous construction firms also need assistance to regularly maintain and repair their plant and equipment and to replace worn-out ones. This will not only help them to maintain good performance levels on projects, but would also increase their confidence to hire out idle plant and equipment.

78. Another scheme, which is already being implemented under World Bank financed labour-intensive rural road projects, is the inclusion of a component to supply basic equipment to selected indigenous contractors. The potential of this scheme should be exploited by African governments in negotiations for rural area projects funded from external sources.

Building materials

79. In many African countries essential building materials such as ordinary portland cement and steel are imported and therefore their supply is controlled by the availability of foreign exchange. In view of the shortfall in supply, distribution systems have been developed to ensure equitable distribution of what is available. Whilst it is difficult to ensure a fool-proof distribution system, an attempt should be made to accord priority to rural-based projects.

80. Increasing attention should also be focused on the establishment of local production units for alternative building materials like burnt bricks and tiles, lime and lime-pozzolana, and fibre-concrete roofing tiles which could be used in the construction of buildings, small bridges and in lining irrigation canals. Appropriate technologies which are simple, low-cost and labour intensive are now available for the production of these materials and African governments should encourage their decentralized development based on the raw materials situation in different parts of the country.

81. The fibre-concrete technology which is now very well developed in some countries, for example, Kenya, Malawi, Tanzania and Uganda, has great potential for minimizing the roofing problem in rural areas. In Malawi, sisal fibre-reinforced cement roofing sheets and tiles have successfully been used in a nationwide rural housing project. Since 1981, when the project started, over 30,000 square metres of the sheets (1000x760x9mm) have been produced to roof the houses of beneficiaries. The project started developing the tiles (600x280x7mm) in 1984 and these have been promoted since then as an alternative to the sheets. The Nigerian Building and Road Research Institute in Lagos has also developed fibre concrete roofing sheets using coir fibre. The technology has been adopted by the national Directorate of Food, Roads and Rural Infrastructures in its rural housing improvement programme.

82. The production of a low-cost cementitious material from lime and pozzolana (natural pozzolana, calcined clay, calcined bauxite waste, rice husk ash, bagasse ash, etc.) could be developed in many African countries. Lime-pozzolana mixes can be used as a replacement for ordinary portland cement in some construction applications like making building mortars, blocks and plasters. Up to about 30 per cent of portland cement could be substituted in mass concrete with a pozzolana of a suitable quality without affecting the final strength. 18/

Promotion of interaction between contractors' associations and concerned government ministries and institutions

83. The performance of contractors in the construction industry in African countries, as in other developing countries, is affected by two main sets of factors: those related to deficiencies in their own organization and operations; and those related to other actors in the sector and which are normally outside

their control, for example, shortage of construction inputs, inadequate credit, delays in payments for completed works, etc. Governments, being the major clients in the construction sector in African countries, have a responsibility to create favourable conditions to ensure the achievement of high performance levels by construction firms. This is in the interest of governments since better returns would then be achieved for investments in buildings and civil works.

84. Conversely, contractors owe it as a duty to themselves to exercise concern about matters affecting them and to take such measures as would promote the practice of their trade. It is to this end that contractors' associations should be formed, and indeed have been formed in some countries, as a means of providing members with a forum to discuss their mutual problems, and to represent them in negotiations with the government, which is their major client.

85. Each of the three major actors involved in the construction process - the client, the consultant and the contractor have their own objectives which sometimes may appear conflicting. However, an efficient contractual system would help to optimize output and minimize costs whilst ensuring that each party in the process perceives that his objectives are, at least, partially realized. This calls for continuing dialogue among the parties to resolve problems facing the construction industry as a whole.

86. Thus the peculiar problems related to the design and organization of construction for the provision of infrastructures and service facilities needed to support development activities in the rural areas would be addressed to evolve workable solutions in the context of limited resources. Contractors have a special role in maintaining the dialogue especially with the government because it has to deal with allocation of scarce financial resources to a number of competing sectoral demands most of which are accorded high priority in national development plans. The dialogue should also assist in rationalizing the organization of the construction sector to ensure efficiency and improved returns on investments.

V. THE RESPONSIBILITIES OF AFRICAN GOVERNMENTS, REGIONAL AND INTERNATIONAL ORGANIZATIONS

Responsibilities of African Governments

87. The majority of governments in Africa are increasingly being confronted by economic problems which place limitations on the financial resources they can make available for national development projects, particularly for the provision of infrastructures and services to support development in the rural areas. The government is a principal actor in the creation of roads, irrigation canals, water supply systems, etc. in the rural areas by the construction sector. It therefore has an important role to play in ensuring that the sector operates efficiently.

88. The following measures are suggested for the attention of governments of member States:

- (i) Encourage the development of designs and application of construction techniques that are geared to economy in the consumption of scarce (imported) building materials and promotion of the use of locally available materials, as well as construction skills;
- (ii) Promote the development and increased production of local building materials within the framework of a decentralized system based on locally available resources in rural areas and appropriate production technologies;
- (iii) Create or strengthen existing technical capacities within district/local level authorities to facilitate the design and implementation of infrastructure projects in rural areas;
- (iv) Review procedures for contract administration, with special reference to projects in rural areas, with a view to minimizing bottlenecks which, among others, result in delayed payments to contractors;
- (v) Encourage the development of construction capacities at the district level through the provision of financial assistance, provision of training in technical, administrative and management skills, and exercising preference in the award of local contracts;
- (vi) Encourage the formation of co-operatives of local craftsmen and artisans and assist them in securing sub-contracts or contracts for simple infrastructural and services projects in the rural areas;
- (vii) Provide incentives, including preferential allocation of scarce building materials, to contractors who opt for projects in the rural areas;
- (viii) Encourage research on the development of innovative building materials, and construction systems and techniques suitable for application in rural areas.

Responsibilities of regional and international organizations

89. Regional and international organizations also have a role to play in assisting African countries to overcome bottlenecks in the design and implementation of construction projects that are planned to enhance economic and social development in rural areas. Their resources, including finance and experiences gained in some African countries as well as in other developing countries, must be utilized to support the efforts being made by the governments of African countries.

90. Specifically, their assistance in the following areas would have beneficial results:

- (i) Encourage the adoption of appropriate building materials and techniques in the design and construction of projects for which external funding is provided, giving due consideration to the need to maximize the use of local resources including labour;

- (ii) Support research on the development of innovative building materials based on locally available resources and techniques for their application in rural infrastructural projects;
- (iii) Assist in providing training in the production of building materials using appropriate technologies, and in developing the capacities of small-scale construction enterprises based at the district level to ensure their greater participation in project implementation in rural areas;
- (iv) Assist in the development of design standards and specifications as well as codes of practice that are relevant to the social, technical and economic situation in African countries.
- (v) Assist governments in reviewing the organization of the construction industry with a view to improving efficiency and enhancing project planning and implementation;
- (vi) Promote information exchange on various aspects of the construction industry among African countries and also between them and countries outside the African region.

REFERENCES

1/ For example, Technical publication on Approaches to the Formulation of Comprehensive Construction Planning and Implementation Policies in Africa. E/ECA/HUS/28, December 1987.

2/ FAO Report of the World Conference on Agrarian Reform and Rural Development, WCARRD/REP. July 1979.

3/ FAO Report of the World Conference on Agrarian Reform and Rural Development, WCARRD/REP., July 1979.

4/ J. Howe and P. Richards: Rural Roads and Poverty Alleviation, I.T. Publications, 1984.

5/ Anderson G.V. - Effectiveness and Impact of the CARE/Sierra Leone Rural Penetration Roads Project, AID Project Impact Evaluation Report No. 7, 1980.

6/ Trends in Road Use in Kenya, Ministry of Transport and Communications, July 1981.

7/ International Drinking Water and Sanitation Decade: Regional External Support Consultation, 25-28 November 1985, Cote d'Ivoire, Paper entitled: Africa-regional Resource Mobilization Profile.

8/ UNCHS (Habitat): Infrastructure Provision in Shelter Programmes. Background paper for East African Sub-regional Meeting on IYSH, 1986.

9/ Report on the Rural Health Survey, 1982/83, Vol. 2, Central Statistical Office, Bulletin No. 52, Ethiopia.

10/ D.C. Okpala: Human Settlements in Africa's Development, Rural Progress Vol. VI, No. 2, 1987, ECA, Addis Ababa.

11/ E.O. Lufadeju: The Role of Shelter in Economic Development in Africa, African Urban Quarterly, Vol. 2 No. 3, August 1987.

12/ Judith Tendler-Rural Projects Through Urban Eyes. World Bank Staff Working Papers, No. 532, 1982.

13/ G. Edmonds (ILO): Labour-based Construction Comes of Age. Appropriate Technology, Vol. 10, No. 1, June 1983.

14/ Ibid.

15/ ILO: Pre-investment Study for the Development of Small-scale Construction Enterprises in Tanzania, 1983.

16/ Kiaratu, A: The Role of BHESCO in Importation and Distribution of Building Materials. Paper presented at National Construction Council Building Materials Seminar, 27-29 April 1982, Arusha, Tanzania.

17/ ILO: Pre-investment Study for the Development of Small-scale Construction Enterprises in Tanzania, 1983.

18/ State of the Art of Local Building Materials in Africa, E/ECA/HUS/31, April 1986.



UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL



Distr.
LIMITED

E/ECA/HUS/38
January 1986

Originals: FRENCH
ENGLISH

ECONOMIC COMMISSION FOR AFRICA

Fifth meeting of the Joint Intergovernmental
Regional Committee on Human Settlements and
Environment

Addis Ababa, Ethiopia, 12-17 February 1986

LC/NAIROBI.

STUDY ON POLICIES AND PROGRAMMES IN
HUMAN SETTLEMENTS TO ACCELERATE RURAL TRANSFORMATION
AND REDUCE DISPARITIES BETWEEN URBAN AND RURAL AREAS
IN AFRICA

INTRODUCTION

1. The fourth meeting of the Joint Intergovernmental Regional Committee on Human Settlements and Environment stressed the fact that rural transformation based on sound regional and physical planning was vital to the implementation of Africa's Priority Programme for Economic Recovery and the United Nations Programme of Action for African Economic Recovery and Development. The meeting appealed to member States to give higher priority to physical planning, development and management of their human settlements and to take necessary measures to integrate physical planning and rural transformation policies and programmes into national socio-economic development planning.
2. This study was prepared pursuant to the resolution on human settlements adopted by the fourth meeting of the Joint Intergovernmental Regional Committee on Human Settlements and Environment. It deals with a problem affecting African countries as a whole and which hinders any development efforts undertaken by African countries.
3. If regional disparities are defined as differences in levels of economic development between areas of the same country, then all African countries have such disparities. Depending on development policies, some regions of the same country may receive more investment than others whereby creating regional disparities. Similarly, such disparities are evident in sectoral investments outside a nation-wide land-use planning.
4. As they grow, cities and their surrounding rural areas cause more and more problems which are so complex that it has not always been possible to find adequate strategies to solve them.
5. Although various methods and regulations that could help to bring about changes in the rural sector and reduce the urban-rural gap have been considered, they do not seem to be well understood perhaps because problems are peculiar to each country and necessarily call for specific solutions. That is why priority should be given to approaches that can be used as a basis for case studies.
6. Many planners, developers, sociologists and geographers in Africa have voiced their opinion on this burning issue. One of the most remarkable opinions was expressed by Jacques Eugnicourt in his 1971 publication on disparities in Africa; it was the first publication based on significant statistics which tackled the problem from an original angle. The present study drew considerably from Eugnicourt's work. In 1985 Guimbela Diakité tackled the problem from the perspective of a spatial economy while in 1984 ORSTOM researchers concentrated on secondary towns.
7. Other sectoral and land development studies have been carried out since 1970 by various persons, engineering firms and organizations such as USAID, UNDP, and UNEPA.
8. The present study attempts to review what has happened since the colonial period, takes a look at policies and programmes adopted and implemented to reduce rural-urban disparities and proposes a new approach to the problem.

1. APPRAISAL OF THE SITUATION

9. The economic development of space is generally accepted as one of the sciences that deal with delimitation.

10. However, its contents are ambiguous; such ambiguity could stem from the fact that it is either not adequately defined or it is defined in different ways. Problems such as the disparities between urban and rural areas are hindering development efforts in Africa.

11. For several decades, some African countries have endeavoured to set up data banks, draw up development plans and sectoral studies that could be used to reduce the urban-rural gap. Although the objectives selected by the States are not always feasible and hence yield very little, they should be hailed at least as a good beginning.

1.1 Background: Destruction of African Space
During the Colonial Period

12. «The whole of Black West Africa is one huge rural area despite its remarkable urban development along the Atlantic Coast.»

13. This assertion by Paul Pelissier in 1966 could be applied to Africa as a whole as it gives an accurate picture of the rural situation in the continent, namely, an area destroyed by a difficult colonial past and unfavourable climatic conditions and by, an implacable drought aggravated by man; an area where the lack of planned development has resulted in deforestation and unsuitable cropping techniques which in turn have created a situation of insecurity and a massive exodus of people to urban centres with a less hostile environment. Such exodus has created an imbalance which is threatening the very survival of the rural farming community who had for a long time demonstrated just how resourceful they were.

Various Approaches to Land Development in Africa

The Colonial Period

14. The colonial powers used two policy instruments, agricultural and administrative, to control land in Africa. With respect to agricultural instruments, individual countries were divided into two areas:

- (a) «Useful» areas where cash crops were grown;
- (b) Peripheral and unmarked areas where no crops were grown.

15. In the «useful» areas, the necessary facilities were quickly built; however, as a result of the single-crop economy, the traditional social structures were destroyed.

16. The peripheral areas were much less affected. However, like the «useful» areas, they suffered from administrative consequences such as changes in chieftaincy systems and new administrative divisions totally alien to Africa. Independence has not brought many changes.

17. The approach to rural areas has been about the same as during the colonial period and export-oriented economic and administrative policies have been pursued. In such a situation, it is difficult to speak of urban-rural relationships since the system which was established itself created the disparities mentioned earlier.

18. Most African countries have inherited relatively diverse expanses of land made up of territorial units and an externally-oriented economy characterized by all sorts of imbalances that aggravate their dependence on the outside world.

19. From an economic viewpoint, the imbalances are apparent in agriculture which is the main source of foreign exchange. Agriculture, which was a means of maintaining the social balance in pre-colonial times became a commercial activity under colonization which distorted the cultural and social fabrics of African society so severely that it still has not been able to come to terms with it. In 1969, Charles V. Diarassouba summed up the situation thus: «Agriculture was organized according to available resources and its main purpose was to provide sustenance to rural communities and therefore was the foundation of a way of living and of an economy in which trading in factors of production and produce was irrelevant; when there such trade, it was done among people with blood ties or allies and had only a social meaning». The spread of and trade in cash crops encouraged the rural population to seek monetary profit; this destroyed the social and land use structure of African society.

20. Colonization and its impact on various sectors of space in Africa is largely responsible for the deterioration in the present situation. We do not think that the post-independence era has brought any significant changes in Africa.

21. The terms of transferring financial resources from the agricultural/rural sector to the economy as a whole have remained the same. And from whatever aspect the trend is viewed (prices, income, budget, investment), the rural sector has always been the loser. It got back only a tiny fraction of what it lost.

22. Given this situation, decision makers (politicians, planners) should adopt new policies to develop rural areas and correct the disparities between the regions.

1.2 The Land Situation in Post-colonial Africa

23. Since independence, the development of African capital cities has led to imbalances and major social changes that have influenced standards of living, housing and spatial planning in general. Raw materials have been taken from the villages to the cities and caused serious disparities between rural and urban areas: the economic (agriculture) and human potential of the rural areas have fuelled the development of urban areas while the rural areas have received nothing in return except increasing poverty, as described by C. Vidrovitch (1985).

24. «In barely less than half a century, a steadily swelling mass of peasants has flocked from the countryside into mining, administrative and/or industrial towns fleeing poverty and a shortage and lured by the mirage of a new life as wage earners and participants in the money economy and by the prospect of Western-type needs - such as clothes, radio and entertainment (football and cinema). The growth rate of the urban population which started expanding around the 1930s has, since the Second World War, particularly since the independence of most African countries, turned into an unprecedented explosion which is comparable to the urban phenomenon in Asia and Latin America.

25. The urban population explosion is a dramatic reverse trend. Until recently, Africa as a whole had a predominantly rural population (85 per cent of total population in 1950 and still over 70 per cent in 1980); between 1950 and 1980, the population tripled but the rural areas accounted for nearly two-thirds of the population increase. Between 1980 and 1990, not only this trend will

accelerate (161 million more people that will double the population in 23 years, as compared to 171 million between 1960 and 1980) but the majority of the population will be urban (55 per cent). This movement will gather momentum between now and the end of the century: between 1990 and the year 2000 there are expected to be 126 million more city dwellers (nearly two thirds of total growth). In other words, during the second half of the twentieth century Africa's urban population will have increased ten fold.

26. «Within each of the 50 African States (including North Africa) population pressure is not uniform. Some like Nigeria (83 million) and Ethiopia (31 million) are heavily populated; some are vast: like Zaïre and the Sudan; some are less densely populated such as Mauritania and the Niger and some, like Gabon, are obviously underpopulated. With the exception of the specific cases Rwanda and Burundi which are densely populated rural countries in the heart of Africa and the enclaves within South Africa such as Lesotho and Swaziland, African countries are facing an unprecedented wave of urbanization. Urban growth in Kenya is close to 5 per cent. It is a major phenomenon in the contemporary world with no equivalent and it affects the whole continent».

27. This situation has resulted in disparities between urban and rural areas and between regions, reflecting a whole set of factors and complex relationships that make it difficult to design an approach that is transferable.

II. REGIONAL DISPARITIES AND LAND DEVELOPMENT IN AFRICA

(a) The concept of disparities

28. As far as the main definitions and causes of disparities are concerned, some scholars consider them as inequalities of all sorts between various zones of the same area. Furthermore, such disparities could be the result of a policy of neglect (during the colonial period) or of priorities (political options).

29. Those scholars who have been studying what form disparities take and how best they can be understood have put forward the following key criteria:

(a) Insufficient knowledge of the environment, explained by Bugnicourt as «opacity effects»;

(b) Provision of inadequate infrastructure: this is specific to each country;

(c) Migration and despair.

30. Bugnicourt rightly points out that an analysis of the disparities is made more complex by the specific nature of each country where the potential and development levels are different. A further difficulty has to do with the scope of analysis.

31. Such difficulties have not discouraged African countries nor have they weakened their resolve to eliminate disparities between national capital cities and other regions and between such regions and their hinterland.

32. Most development plans and urban land development plans designed by African countries are aimed at achieving a better balance in the utilization of space. However, statistics show that there are variations in indicators, particularly in facilities and services, population, school attendance rates, production, industrial decentralization and employment.

(b) Disparities between rural and urban areas

(Preliminary observations on the urban and rural environment in Africa)

33. Although the majority of Africa's population is rural, the rural areas are vast and underpopulated while the towns which cover a small surface area are densely populated.

34. The rural population is almost exclusively engaged in the (primary) agricultural sector while the urban population earns its living mainly from the secondary and tertiary sectors.

35. As a percentage of total population, urban population in black Africa is currently the lowest in the world; it was 32 per cent in 1965 but its growth rate is one of the highest ever recorded. The urban population will remain smaller than the rural population for some time to come.

Example: in 1970

Urban population as a percentage
of total population

Senegal	20 per cent
Côte d'Ivoire	20 per cent

36. The growth of the African population is not alarming; however, cities, particularly administrative capitals, are growing very fast.

37. Spontaneous growth, which is the main consequence of rural migration affects virtually all countries in black Africa. It jeopardizes the economic development of African States since it usually takes place at the expense of the rural areas.

38. Between 1920 and 1940, there was an increase in the population of all categories of European cities. The same thing occurred in developing countries but in more significant proportions.

39. From 1940 to 1960, the populations of all European cities increased but the larger the city, the lower the population growth rate. What happened in Africa, during the same period was the opposite in the sense that the larger the city, the higher was the increase. This was particularly true for the main administrative capitals whose population increased three, four or even five fold.

40. On the other hand, the increase in the rural population is much slower since it depends on both fertility and mortality and other equally important factors mentioned among our criteria and to which reference shall be made in the following chapters.

41. The purpose of this paper is therefore to help provide a better definition of the relationships between the cities and the rural areas and provide answers to questions about African rural areas and their relationships with the urban areas.

42. While physical development is necessary, it should be made clear that in Africa, the land in rural areas is developed basically for agricultural purposes; other activities are marginal to agriculture.

43. Although there have been changes, this trend is still dominant. No African State can deny the fact that its rural areas have been badly developed; this is particularly evident in agriculture where there has been a rapid reduction in the active labour force, the traditional values of society have been destroyed, and ideas derived from the modern economy have taken root. Such changes in the rural areas cause serious problems in land development.

44. The development of the rural areas is not a sectoral problem. It is a global issue which affects all the activities, values and concerns of our time.

45. What should be considered now is how to go about saving the rural world caught in a society in a state of flux.

46. Economic logic calls for a complete change in the structures of African society; such change affects the balance between different areas as a result of settlement patterns, activities and life-styles. It requires all sectors of activity to be efficient, productive and competitive. African rural areas have not been able to meet the challenge.

47. In traditional societies, agriculture was both a way of life and a way of land management. It was the hub of the crafts industry of the rural communities. Although the cultural and economic relations of villages were few, they were stable and peaceful. Very few people lived in the cities. The economic and political power of cities were derived from the rural areas.

48. Today, the effects of industrialization have disrupted this pattern and opened up new perspectives. The suzerainty of rural areas has been shattered. As the following statistics on some African countries show, cities have become the driving force behind economic, social and demographic change.

(c) Planning policies in some African countries

49. After independence, most countries set up political and administrative structures to implement future development plans. Very few countries managed to implement the plans fully.

50. More often than not, development plans have consisted of lists of projects carried out through international grants or as a result of political pressure from the beneficiaries. Since there is hardly any follow up or evaluation nor any homogeneous and quality information, satisfactory performance could hardly be expected. Disparities between and within regions (between urban and rural areas) are widening; planning techniques focus solely on the national level making any social trickle down effects that normally come from comprehensive development increasingly uncertain. Central organization is still based on categories of activities without being supplemented by decentralized organization.

51. Most of the problems remain unsolved since they can be solved only within a regional context.

52. For sound rational planning, any action in spatial development must take into account the whole area in spite of its diversity.

53. Very few countries have devised genuine land development or even space management plans. Far greater progress has been made in economic development than in land management. Some of these countries that did devise land development plans used a two-fold approach that favoured the urban at the expense of the rural areas. Very few selected an integrated approach that could have reduced the urban-rural gap.

54. The shortcomings that have been indicated in those States with policies and programmes nevertheless constitute substantial progress when one considers that other States have programmes to address only specific needs.

BURKINA FASO

Country profile

Population

55. In 1985, Burkina Faso which has an area of 274,000 km² had a total population of approximately 7 million - an average density of 26 inhabitants per km². The rural sector provided a living for nearly 90 per cent of the active population and accounted for 45 per cent of the gross domestic product.

Population distribution

56. The population is very unevenly distributed. The northern part has four inhabitants per km² while the Fossi plateau has 70 inhabitants per km².

57. The annual growth rate is 3.2 per cent and 200,000 to 250,000 people migrate abroad every year or move to other domestic cities.

58. The urban sector is quite small; 96 per cent of the urban population is concentrated in three urban centres one of which is Ouagadougou, the capital. The urban population accounted for 5 per cent of the total population in 1960, it grew to 8 per cent in 1975 and to 11 per cent in 1982; the annual growth rate of the urban population between 1960 and 1970 was 5.7 per cent and it was 6 per cent between 1970 and 1982.

Facilities

59. There are very few facilities as a result of low investments and little development. Although a few disparities were partially eliminated this was done under sectoral programmes and not as part of a human settlements plan or programme.

60. Until 1983, there was no coherent and sustained national planning programme. Since then, town development plans have been drawn up. Such plans should help to reduce the disparities between the country's regions.

Planning policy from independence until 1985

61. Until 1983, Burkina Faso implemented a sectoral planning policy that failed to correct the disparities in the country. Development plans existed only on paper. With the advent of the Military Committee, a national agency embarked on a bold national planning policy. All existing human settlements development measures were maintained and strengthened; such measures included:

- housing policy;
- land tenure policy;
- administrative decentralization; and
- the relationships between the urban and the rural sectors and the advancement of the rural populations.

REPUBLIC OF GUINEA

Population Distribution by Natural Region

Region	Area Km ²	1972		1980	
		Population	Density	Population	Density
Basse Guinée	30,200	1,391,679	30.2	1,723,216	47.6
Moyenne Guinée	63,600	1,674,381	26.3	2,086,285	32.8
Haute Guinée	96,657	1,012,328	10.5	1,262,632	13.1
Guinée Forestière	40,374	1,074,096	21.2	1,340,701	37.2
Total	245,957	5,143,204	20.7	6,412,824	26.1

62. Population pressure is greater in Basse Guinée where most facilities and means of production are located.

63. By the year 2,000, Guinea will have a population of nine million, with an annual growth rate of 2.5 per cent. By then, the urban population is estimated to account for 25 per cent of the total population.

64. Migration from the rural areas is another factor of imbalance between the regions. Ever since the colonial period, Moyenne Guinée has been a reservoir of farm labour: migration from region to region is done in parallel with international migration (examples: towards Senegal).

65. Migration to the cities has been increasing steadily and this has an adverse impact on the spatial distribution of land use, agriculture and the production sector.

Relationships between the urban and rural areas

66. Guinea's rural sector like that of most African countries contributes 40 per cent to GDP formation. It provides a living for 90 per cent of the population and it has an annual growth rate of 1 per cent. With 7,400,000 hectares of arable land and an area under cultivation of 1,100,000 hectares, the rural sector is the backbone of the economy.

The urban sector

67. The urban population was estimated at 437,000 people in 1970. It increased to 513,000 people in 1980; its annual growth rate was 6.2 per cent between 1960 and 1970 and 5.5 per cent between 1970 and 1980. The city of Conakry had 500,000 people in 1980 and presently it is home to 15 per cent of the country's population. Like most African capital cities, Conakry is a primate city; all the facilities and services are concentrated there. Faranah is also a fast growing city; its growth rate is, however, not as fast as Conakry's.

68. No reliable data are available to better illustrate the imbalances within and between the four regions.

69. Urban classification has been based on two main criteria: population and the concentration of facilities. Hence, cities have been classified into three types: type one which is represented by Conakry only; type two being cities with more than 20,000 inhabitants and type three, cities with less than 20,000 inhabitants.

70. In 1980, Guinea had 6,000 km of national highways including 1,252 km of paved roads and 8,000 km of interregional roads in a rather decrepit condition.

Telecommunications

Guinea had a telephone density of 0.16 per 100 inhabitants in 1980.

The socio-economic situation of the regions

71. The following table shows that there are two main problems: the data available are too sketchy to permit a clear assessment of the situation and there is a yawning gap between Conakry and the other regions.

TABLE : SOCIO-ECONOMIC SITUATION OF THE REGIONS

	Conakry	Basse Guinée	Moyenne Guinée	Haute Guinée	Guinée Fores- tière	Total
Timber industry	1	-	-	-	17	18
Agro-industry	3	1	2	3	1	10
Building materials	5	1	-	1	-	7
Processing industry as a whole	23	2	3	4	6	38
Mining industry as a whole	-	3	-	1	-	4
Hydroelectric dam	-	2	1	1	-	4
Paved roads (km)	165	316	209	267	215	1252
Railway (km)	-	620	168	272	-	1069
Port	1	1	-	-	-	2
Cities type 1	1	-	-	-	-	1
type 2	-	2	2	2	1	7
type 3	-	5	0	7	6	27
Hospitals, 1st and 2nd category	2	3	2	2	1	10
University	1	1	-	2	-	4
Cities with electric power	1	5	4	4	1	15
Cities with water supply	1	5	4	3	1	14

Sources: B. Krumah: «Expérience guinéenne sur les politiques mises en oeuvre dans le domaine de l'aménagement du territoire (1985)»

72. Although Guinea became independent in 1958, it is only recently that economic and spatial policy was incorporated into a general planning framework. A ministry of land development was established in December 1984; until then, studies undertaken with respect to land development were sectoral. The five economic and social development plans that have been prepared since independence have looked more like sectoral investment plans than integrated development plans.

Shortcomings of planning in Guinea

73. As mentioned earlier, Guinea has many shortcomings with respect to planning: Guinea started planning how to manage its space very late; economic and social development policies emphasized investment while the spatial aspect which should have served as a foundation for such investment in order to ensure equitable development was totally overlooked. In 1985, Bréhima Kourouma indicated other shortcomings, i.e., the lack of methodology, shortage of data that were vital to a proper understanding of problems, the fact that the people concerned were not involved in devising programmes and the lack of qualified planners.

SENEGAL

74. Statistics available cover only the eight previous administrative regions.

Population

75. Senegal has a total population of 6,038,000 (1982 figures) with an annual natural increase of 2.9 per cent. The density is 31 per km² and the urban population accounts for 32 per cent of the total population.

(a) Emigration: About 80,000 people from the various regions of Senegal lived in France between 1979 and 1980.

(b) Domestic migration: The 1976 census figures indicated that as a result of interregional migration, approximately 655,377 people lived in regions other than those of their birth. The Cap-Vert region was one of those affected by such interregional migration.

Population distribution

Regional disparities in population density

76. Population density in the Cap-Vert region was 1.464 inhabitants per square kilometre in 1971 and 2,338 inhabitants per km² in 1982 while for the same period the national rate grew from 23 to 31 inhabitants per km². Cap-Vert's population density was 64 times higher than that of the rest of Senegal in 1971 and 75 times higher in 1982.

The table below shows Cap Vert's population density compared to that of other regions

REGION YEAR	CASAMANCE	DIOURBEL	LOUGA	FLEUVE S. ORIEN- TAL		S.SALOUM	THIES	SENEGAL
1971	61 fois	63,65		146,4	292,8	39,57	15,41	63,65
1973	63,38	63,36		144	316	40,62	16	66
1974	65,92	68,67		437,33	329,60	41,20	16,32	65,92
1975	68,52	68,67		142,75	342,60	41,78	16,63	71,38
1976	68,85	18,27	119,33	137,69	358	42,62	17,05	68,85
1977	71,67	18,82	124,20	143,31	372,60	43,33	17,25	69
1978	71,78	19	129,20	149,08	387,60	44,05	17,46	71,78
1979	75,35	19,76	135,67	156,54	407	45,22	17,85	72,68
1980	76,32	20,95	142,47	164,38	427,40	45,47	18,26	73,69
1981	85,57	21,79	144,38	177,69	385	47,14	19,41	79,66
1982	80,62	21,65	146,13	179,85	389,67	46,76	19,16	75,42

Cap-Vert's area is much smaller than that of the other regions.

	CASAMANCE	DIOURBEL	LOUGA	FLEUVE	S. ORIEN- TAL	S.SALOUM	THIES	SENEGAL
Ratio to other regions	51,55	7,93	53,07	80,2	108,4	43,54	12,00	357,68

Source: Statistics and indicators per region, Senegal, ITC 1984.

77. The Cap-Vert region covers 0.28 per cent of Senegal but it has 18 per cent of total population, 70 per cent of the total number of physicians, 69 per cent of total hospital beds, 80 per cent of industrial concerns, 67 per cent of all salaries. Thus, Dakar which is already a primate city, makes the existing gap between it and the other regions even wider.

The rural aspect of the regions

78. The rurality criterion gives a partial picture of disparities in each region. The higher the criterion the more rural the region is.

79. The following rurality ratios were recorded in 1976: Cap-Vert 0.40, Sénégal Oriental 158.25, Fleuve 98.16, Louga 70.77, Casamance 70.43, Siné Saloum 56.21, Thiès 14.15 and Diourbel 10.23. Although these figures are old, they are still valid.

80. The figures above show just how wide the gap is between Cap-Vert region and the other regions. Cap-Vert is well ahead of the other regions in terms of density, domestic migration and urban development and this proves just how under-developed Senegal is. The rurality criterion is almost nil in Dakar if the mode of calculation and definition adopted by planners in Senegal is used, namely, multiplying the ratio of the regional rural population over the regional population by the ratio of total regional rural population over the national rural population, and multiplying the product by the converse of density.

81. The disparity between Cap-Vert and the other regions is sharply highlighted by the distribution of public facilities; the other regions lag far behind.

82. Although investments have had a slight impact on developments in the socio-economic situation, the impact has not been strong enough to alter the imbalances between the regions; it has in fact heightened them.

83. Senegal is one of the few African countries to establish a genuine planning policy aimed at reducing the disparities between and within regions although the achievements so far are not very significant.

84. Immediately after Senegal's independence in 1960, the first development plan that was prepared aimed at giving the country an integrated development plan that would cover all urban and rural areas. There were policy changes in 1962, subsequent plans (second to sixth plan) were markedly sectoral in nature.

Physical planning bodies

85. Senegal's initial physical planning efforts focused on the rural sector. As early as 1962, an office responsible for the physical planning of local communities and villages was established within the Planning Commission. The aim of the office was to promote and co-ordinate primary development activities for balanced local development. In 1964, the Rural Physical Planning Office became a national department under the Directorate of Planning, with its responsibilities extended to the whole country; it also retained its initial role. In 1967, it became a Directorate within the Ministry of Planning and Development.

86. Although Senegal has a national physical development plan, its policy with regard to physical planning has remained nothing but a theory. Serious planning really started with the fifth economic development plan where regional aspects were taken into account.

87. With the Sixth Plan the Government became more aware of the need to make the development of rural space its main objective. This brought to a halt the monotonous chain of plans that had started in 1960. This was a reversal of a rural development policy considered by many as a dramatic failure in view of its performance.

88. In the case of Senegal, despite efforts made at the institutional level, regional disparities continue to widen.

GABON

89. Gabon has a total population of about one million. Nearly 500,000 inhabitants or nearly 50 per cent of the population live in Libreville, the capital, Port Gentil and Franceville. Seventy-two per cent of all economic activities are concentrated in the three cities. These figures show that there is a clear-imbalance between the three cities and the rest of the country.

90. Since 1970, due to economic expansion, urban areas, particularly the three cities mentioned above have developed rapidly. Since the other urban centres were not able to provide jobs for their population, they have gradually become labour reservoirs.

91. The three cities flourished because of oil and mineral exploitation and the development of tertiary activities. During the same period, there was a decline in traditional activities particularly in agriculture, further aggravating regional disparities. Such disparities have triggered considerable migration of rural folk to the urban areas; this trend is on the rise and its immediate consequences are an ageing rural population and a decline in agriculture.

92. If the trend continues, there will be financial, economic, social and cultural imbalances. This prompted the Government to draw up a master plan on national physical planning in 1977.

93. The overall objectives of the plan are:

(a) To strengthen national unity, reduce regional disparities and develop the country's potential;

(b) To regulate rural-urban migration in order to achieve an optimum management of human resources and improve living conditions in the rural areas;

(c) To ensure that all Gabonese are thoroughly conversant with and are involved in the country's development ideal.

94. The operational objectives of the plan are:

(a) To provide Gabon with the appropriate agencies to ensure the successful implementation of its physical planning policy;

(b) To establish appropriate bodies that would ensure the active involvement of the people in efforts aimed at developing their provinces;

(c) To promote a spatial, economic and socio-cultural restructuring policy designed to reduce disparities and inequalities in the provinces;

(d) To develop the provinces by making use of their potential and renewable resources so as to promote sustained and meaningful development that would encourage the rural population to remain where they are;

(e) To co-ordinate regional endeavours with a view to including them in the national development planning framework since the provinces should not develop in a disorderly fashion.

95. The successful implementation of the overall national physical plan should enable Gabon to achieve a measure of balanced development:

(a) among its provinces;

(b) between modern and traditional activities;

(c) between the exploitation of mineral and oil resources and the development of renewable resources;

(d) between the cities and the countryside;

(e) in trade and in the movement of goods.

CENTRAL AFRICAN REPUBLIC

96. In the Central African Republic, the urban population accounts for nearly 34 per cent of the total population which was estimated at 2,500,000 in 1984.

97. According to a study by Seraphin Fonariamatourou entitled «Human Settlements Planning in the Central African Republic» (1985), there was no physical planning policy in the country prior to 1981; the capital, Bangui, continued to grow at the expense of other urban centres; rural migration was on the increase and the gap between Bangui and the rest of the country was widening. This concentration of activities in Bangui had two main consequences: spontaneous urbanization characterized by anarchic occupation of space and the depopulation of the hinterland.

98. To remedy the situation, action was taken at national level and the main objectives were as follows:

(a) To initiate and direct the development of the hinterland in the framework of an integrated development policy;

(b) To redesign town plans;

(c) To spell out, in detailed plans, the same guidelines as those in the master plans.

99. At the same time, a land code which stipulates that the State is presumed to be the proprietor of all vacant urban and rural land was promulgated so as to facilitate the implementation of physical planning policies.

100. These new directives should make it possible to modify all legislation and regulations governing the occupation of space in urban and rural areas of the Central African Republic.

RWANDA

101. Rwanda has a population of 6.5 million, more than 90 per cent of which lives in the rural areas. It has a population density of 200 inhabitants per km² and an annual population growth rate of 3.6 per cent. The population has been estimated at nearly 10 million in the year 2000 and about 20 per cent is expected to live in the towns. In view of the mountainous nature of the country and strong population pressure, Rwanda has had considerable erosion and lost arable land. This situation is complicated by intensive deforestation and encroachment on farm land.

102. In view of that situation, the Government of Rwanda worked out a human settlements development strategy based on the following principles: rationalization of the use of space and consolidation of utilities; the development of appropriate land tenure and institutional procedures; the development of a physical development policy; the strengthening of the role of local communities in the planning and management of human settlements, increasing the supply of housing units through the organization of financing and a systematic recovery of costs; and promoting the production of building materials.

TUNISIA

103. The population of Tunisia was approximately 6,660,000 in 1981. The northern part of the country accounted for 4,155,000 inhabitants or 62 per cent of total population. The northern region is the economically active area, the south being part of the desert.

104. IN a study entitled «vers une intégration de la planification des établissements humains à la planification socio-économique en Tunisie» (1985) Naget Khantouche, indicated that the first decade after independence was devoted mostly to urban management to satisfy needs in housing, utilities and employment and thus to provide Tunisian cities with a coherent spatial framework allowing each city to limit its expansion and prevent any spontaneous and disorderly growth. All the towns had development plans.

105. During the second decade, specific and general studies were carried out in both the urban and rural sectors. The studies were on the planning of various sectors of development.

106. The third decade started with the preparation of a national physical development plan which was aimed at ensuring coherence and integration of sectoral projects and policies in terms of space. Such a plan had to be prepared in order to reduce regional disparities between the well-endowed area of the north-eastern coast and the rest of Tunisia. It also paved the way for establishing

secondary and tertiary activities throughout the country.

107. The national physical development plan is the basis of human settlements planning in Tunisia. Its main objectives are: to integrate the whole country by building infrastructures to facilitate trade, to preserve natural resources; and to reduce regional disparities by spreading economic activities throughout the country.

108. The national physical development plan is based on two principles: concentrating measures of a national scope on a number of development focal points and gradually developing a network of secondary human settlements that would provide the necessary support to the development of rural areas.

109. In order to work out such measures, the country was divided into development regions on the basis of the following criteria: they should be relatively homogenous groupings; they should have a transport network; each region should have an optimum size of around 500,000 to one million inhabitants, the ideal framework for diversified economic development; each region should have at least one major satellite city to act as point of attraction for rural emigrants.

110. The creation of development regions which are the spatial framework for planning all the economic and social development measures, plans have been made to establish urban centres with attractive community utilities and infrastructures offering good development opportunities.

ZAMBIA

111. In a study entitled «Sub-Regional and Regional Strategies and Programmes for the Development of Human Settlements in Africa: The case of Zambia» (1985), C. MBEVU pointed out that Zambia has a population of 5,700,000 and an annual growth rate of 3.1 per cent. By the year 2000, and if the present growth rate continues, Zambia may expect to have a population of more than 10,500,000. Rural population accounts for 60 per cent of total population while the remaining 40 per cent live in urban areas.

112. The urban population has been growing steadily and most urban areas have doubled their size over the past 10 years. The annual urban growth rate is 7 per cent. Most of Zambia's urban population is concentrated in eight centres consisting of 60 per cent of the urban population located almost exclusively in the Copperbelt. The largest of these centres is Lusaka which has more than tripled its population over the past decade.

113. Zambia's population is distributed over four types of human settlements classified as follows: Ten large urban areas with a population of over 50,000, 31 small intermediate towns with a population of between 5,000 and 50,000, 40 rural townships with a population of between 1,000 and 5,000 and a number of nucleated villages with a population of less than 1,000.

114. The increase in the population of the Copperbelt is attributable to the fact that the bulk of the economic activities in the country are concentrated in the Copperbelt. The increase in population is attributable to natural growth and to rural migration. Regional disparities are the reason for the Decentralization Act that came into effect in 1980. The Act was the result of an effort to revitalize rural towns and to encourage the participation of

all people in the development process. The law gave District Councils the responsibility for guiding and supervising all development activities in their respective areas as well as the formulation and preparation of district development plans.

115. The Decentralization Act also created a hierarchy of towns and centres linked through an elaborated administrative machinery. Most of the bigger towns and intermediate towns serve as provincial headquarters while the smaller towns serve as district headquarters. District councils are expected to be eventually self-reliant in socio-economic life in general. While they assess housing demands, set their settlement goals, formulate their housing programmes, identify resources or potential resources, the Central Government assesses the overall objectives and resources position for the formulation of overall settlement policies and strategies in the country. Policy and strategy formulation therefore constitutes two levels of activity, i.e. at national and local levels. All the programmes of the District Councils are designed to fit in with the five-year national development plans.

116. The disparities between the Copperbelt and the rest of the country have been reviewed in the preceding paragraphs. Despite the implementation of many regional development programmes, the situation has not changed. What has been lacking so far is a genuine urban development policy at the national level and co-ordination of the various urban development programmes. Although, rural development is the key to Zambia's development, it cannot be treated in isolation from urban development. Co-ordinated urban development should be an essential and complementary part of rural development policy. It is in this context, that the Government of Zambia is endeavouring to establish a national human settlements strategy. Such a strategy will indicate the most desirable and feasible growth and distribution of urban population in Zambia, the methods and policy measures to be adopted and the time frame required to attaining the new objectives of the strategy.

KENYA

117. Kenya's total population was 15,300,000 in 1979. By the year 2000, the population is expected to be 34 million. The growth rate of the urban population is 15.2 per cent. If this trend continues the urban population will be 10 million by the year 2000 while the rural population will be 24 million. As a result of their higher level of development, three main cities, namely, Nairobi, Mombasa and Kisumu account for most of the urban population.

118. Migration from the rural areas into the cities is the reason behind the high urban population growth rate.

119. Kenya's human settlements development strategy aims at controlling urbanization while satisfying the objectives of accelerating rural development in order to bring about balanced economic development. The components of such a strategy can be summarized as follows:

(a) The development of service centres for the provision of services such as health, education, trade, water and power in order to improve the access of such services to the rural population thereby improving the standards of living of the rural population. Such service centres were selected on the basis

of Christaller's central place theory. In Kenya, there is a designated local centre for every 5,000 rural population, a market centre for every 15,000 rural population, a rural centre with administrative, social, educational and cultural services for every 40,000 rural population and an urban centre for every 120,000 rural population;

(b) The development of growth centres by selecting 20 intermediate towns in addition to Nairobi and Mombasa. Such towns should be located in development potential areas to promote regional growth. Such towns should be located in relation to population distribution, resource distribution, the transport network and level of infrastructure. The Government has adopted a policy of encouraging industrialists to move from the main cities and to relocate in the intermediate urban centres and take advantage of the local development potential;

(c) The development of an integrated transport and communications network to open up all rural enclaves in Kenya;

(d) Rural development to increase rural productivity and improve the standards of living of the rural population by developing infrastructure, services and production activities.

ETHIOPIA

120. Ethiopia has a population of approximately 43 million, out of which only 11.3 per cent live in urban areas. Thirty per cent of the urban population live in the capital, Addis Ababa. Total population growth is 2.9 per cent per year and if the present trend continues, Ethiopia's population will be 56.4 million in 1994, the end of the 1983-1994 Ten-Year Development Plan. The human settlements distribution pattern in the rural areas is one of the reasons for the low productivity of the agricultural sector. To remedy the situation, the Ethiopian Government has embarked on a nation-wide reconstruction and equipment programme.

121. The lack of infrastructure and low agricultural productivity are some of the causes of rural migration. Such causes are not specific to Ethiopia but they apply to the continent as a whole.

122. Despite the considerable efforts of the Ethiopian Government, there is still much to be done in the urban areas particularly with respect to housing where annual demand is about 30,000 units. Accordingly, in the area of urban development, the Ten-Year Development Plan has focused on land management, building materials, financing, labour, technology and institutional mechanisms.

123. Ethiopia's physical planning and human settlements development programme will continue to be based on the programme of restructuring rural space through villagization and the provision of economic and social amenities and services and means of production. At the end of 1986, 15 per cent of the villages with a population of 1.5 million had been successfully resettled. Although they are major regional development policies of the Government, resettlement and villagization were not conceptualised as objectives of the Ten-Year Development Plan per se but as important strategies for attaining the objectives of the Plan.

TANZANIA

124. Tanzania has a population of 21 million and an annual growth rate of 3.3 per cent. The rural population accounts for 85 per cent of total population and its growth rate is 2.6 per cent per year while the urban population is increasing at a rate of 9 per cent per year. Urban centres are more resettlement centres than production centres generating a process of national development. Rural migration is triggered by the fact that there are more and better developed facilities and infrastructure and better employment opportunities in the urban centres.

125. The long-term strategy adopted by the Tanzanian Government to reduce the disparities between rural and urban areas is based on the principle that urban and rural settlements are interdependent. Hence, a national and regional planning system reflecting such interdependence was established within the National Land Use Planning Commission and the National Environmental Council, to enable the two bodies to reflect the need for regional physical planning as one of the priorities of the National Economic Development Plan. The two bodies take an active part in the decisions relating to the location of industrial units and large development projects so as to monitor population movements from the rural to the urban areas.

LESOTHO

126. Lesotho is a land-locked country which is completely surrounded by South Africa, with a population of 1.5 million; it has an area of 30,350 km². Three-quarters of the country is covered by mountains, the highest of which is over 3,400 metres above sea level. Only 13 per cent of the land is arable and over 70 per cent of the total population lives on the arable land at the foot of the mountains.

127. In a study entitled «Settlements Planning Experience in Lesotho: Historical Analysis», Benedict H. Maseke says that since Lesotho became independent in 1966, South Africa has reduced the number of migrant workers recruited in Lesotho. That situation has caused a considerable in-flow of migrants from the rural areas to the towns in the interior of the country. Thus, the population of Maseru, the capital, has grown from 20,333 inhabitants in 1966 to 53,031 in 1984 and to 120,000 inhabitants in 1985. The annual growth rate of Maseru is 12 per cent and that of the other towns 5 per cent. The problems of poverty, underemployment, squatter colonies, defective housing and low resources are increasing every day. Human settlements planning is based on the Land Act of 1979, the Town and Country Planning Act of 1980, the Survey Act of 1980, the Valuation and Rating Act of 1980, the Valuation and Rating Act of 1980 and the Urban Government Act of 1983.

128. The aim of the Land Act of 1979 was to introduce a leasehold system with transferable rights which could also be mortgaged, sub-leased and inherited, organize regional space in order to establish zones to be urbanized and preserve agricultural areas.

129. The Town and Country Planning Act of 1980 had been enacted to complement the Land Act by focusing on land use control. It enables the preparation of overall fiscal development plans.

130. The aim of the Survey Act of 1980 was to control aerial photography over the country and to license private surveyors.

131. The Valuation and Rating Act of 1980 enables valuation and rating of properties as a source of revenue for local authorities. It also enables the maintenance of sites and recovery of their costs.

132. The Urban Government Act of 1983 enables the creation of municipal authorities to deal with human settlements affairs at the local level. It is a crucial legislation in that it makes it possible to monitor the development of human settlements.

III. THE NEED FOR A NEW INTEGRATED APPROACH TO RURAL AND URBAN DEVELOPMENT AIMED AT REDUCING DISPARITIES

133. In spite of the determination of African countries to reduce disparities between the rural and urban areas, not much has been achieved in concrete terms. Some of the many reasons for this poor performance are that the wrong tools and approaches were used.

134. As indicated earlier, development plans are implemented on a sectoral basis and their objectives over economic, regional or spatial studies are seldom integrated into an overall project that could lead to a global approach. Some of the traditional approaches are reviewed below, they will be followed by our proposals.

1.3 Some traditional approaches

135. Planning involves organizing the use of production factors in order to maintain appropriate balances in a given society or State. Therefore, planning can be considered as a method or tool which is used to ensure a better distribution of production factors within a country. Plans may be sectoral, spatial, regional or integrated.

(a) The national «sectoral» plan

136. The national sectoral plan summarizes sectoral options for a specific period (3, 4, 7 years etc.). The problems and objectives of that period are spelt out in a timetable. Plans comprise problems, objectives, strategy and timetable. National plans comprise a starting point, an objective and the means to attain the objective.

(b) Relationship between national plans and spatial development

137. In 1970, Maurice Tournier rightly highlighted the monumental error committed for many years in overlooking the relationship between economic planning and spatial problems. He wrote: «Since planning is defined as the optimization of available resources for producing goods and services, there is no need to study the relationship between planning and space: the relationship seems to have overlooked planning which is the application of macro-economic theories conceived by the State, the sole decision-making entity. For that reason, (often due to a lack of appropriate techniques), most of the earlier plans overlooked that dimension. This shortcoming in sectoral planning has to do with the fact that in macro-economics it is assumed that space is homogeneous whereas the

concept of space is not as simple as it looks. There are several types of space each with a specific character. The geographer's space is characterized by its diversity; economic space is defined by the relationships between economic operators. The physical planner usually looks at space more in terms of its social aspects. The concept has two meanings. First, according to some scholars, it covers social phenomena. Unlike ordinary maps that contain only physical elements, the sociological map indicates areas of behaviour; it is a geographical assessment of sociological facts. There should be a measure of interrelationship between the various types of plans that would make it possible to maintain a balance in the overall use of space. Although sectoral planning or economic planning in general and spatial planning are different, they seem to be two aspects of the same phenomenon: the development process which covers several dimensions that cannot be considered separately.

137. First, the economic dimension deals generally with GDP growth and the most effective way of attaining growth targets while ensuring proper harmony between the various sectors of the economy. The social or human dimension concerns the equitable distribution of gross domestic production among the people while enabling them to satisfy their basic needs of shelter, food, clothing, health and education through productive employment (elimination of unemployment). The more complex concept of socio-economic development and social justice (growth and equitable distribution of income and employment) is derived from the simpler concept of economic growth involving the population which must be the beneficiary of such growth.

138. However, the above description of development would be incomplete if growth is not equitably distributed throughout a particular country; such balanced growth should also make the best use of the potential of each region; this is how the spatial dimension comes in.

140. Because requirements are many and resources limited, everyone's needs cannot be satisfied at the same time. Therefore, the concept of planning acquires several connotations - national, sectoral, regional and spatial planning of human and natural resources.

141. There are other dimensions:

- Financial: the capital resources required to finance investments and operating costs;
- Monetary: all means of payment that are compatible with development and do not create imbalances such as inflation or recession;
- Political: as a result of an ideological option among the various possible ways of reaching the targets;
- Administrative: the institutional structure to be set up to manage the development process.

142. Spatial planning cannot therefore be treated in isolation from the overall socio-economic planning process. Obviously, planning techniques may differ at each stage. Specific techniques are used in sectoral planning; the same holds true for human and natural resources and spatial planning.

(c) Spatial, regional and physical planning

143. Spatial planning has two complementary and closely linked components:

- Regional planning: this has to do with economic growth in each region and the distribution of such growth in terms of value added per sector within each region; at the same time, it tries to make the best use of regional characteristics and potential and to promote the equitable growth of regional per capita income to bring it up to a level that is comparable with the national average;
- Physical planning: it deals with the optimum location of each programme, project or specific activity and focuses on the rational use of land (town plans, organization of transport and infrastructure in general); its aim is to achieve harmonious and balanced growth throughout a given country.

144. Both types of planning have a common objective, i.e., achieving balanced regional development that fits into national development.

(c) Physical land and spatial planning

145. Although the concept of land development can be considered as being closer to physical planning, it involves more than designing and programming since it also involves active participation in the various aspects of land management. That, at least, is how the concept is understood in France. Since the discipline was developed in an industrialized country it cannot be transposed to a developing country without a minimum of adjustments.

3.2 Objectives and strategies of the proposed approach

146. Apart from approaches, attempts to reduce disparities raise the additional problem of finding accurate information on constraints, i.e., inequalities of all sorts. The information obtained at the regional and national levels is often fragmentary and needs to be processed and disseminated. An important but elusive new component appears when it comes to information on the urban/rural relationship in Africa. What can be considered rural? What is urban? Generally, apart from the capitals and some main cities, the difference between urban and rural areas is difficult to establish. The statistical services find it very difficult to define criteria for working out the differences between urban and rural areas. Although population factors and the development of facilities services are always mentioned, administrative sub-divisions which are more political, often question the statisticians' criteria since the objectives of politicians and statisticians are not the same. It is because of all these factors that a well thought out approach should be proposed.

What should be the main objectives of coherent physical planning?

147. - Balanced economic development throughout a given country that reflects the specific characteristics of each region;
- A reduction of interregional and intra-regional disparities through better distribution of income to the benefit of the underprivileged regions and social classes;

- Attaining a level of semi-industrialization that is well decentralized throughout the country;
- Involving the population in the country's development and in the improvement of its environment are crucial to efforts to reduce the inequalities and disparities affecting African countries.

What strategy should be used?

148. Any sound strategy must be based on a good information system whose data have to be based on the following:

- an appraisal of the situation in terms of requirements, standards of living, potential and prospects;
- an analysis of the data collected;
- a balance sheet.

3.3 Some suggestions on how to put the theory into practice

149. The overall dynamics of the urbanization process in Africa should be studied in order to identify the policies and ways and means of strengthening the role of cities and rural centres and thus converting them into the driving forces behind economic and social development within a strategy based on the integration of the urban and rural economies and optimum returns from investments.

150. After setting up the information system described above, broader studies should be carried out to identify the following:

- changes that affect production structures;
- factors that affect new growth and the organization of human settlements;
- the accompanying stabilizing and destabilizing effects in the social and spatial sectors, ways and means of helping the regions to adapt to the various changes and to define preliminary economic action to be taken.

151. It should be noted that sub-Saharan countries have for a long time relied on the recovery of rural production for their economic development. While this objective has not produced the expected results, it should not be discarded altogether.

152. In a recent study entitled «Evaluation of urban development in Senegal», USAID pointed out that investment strategies should concentrate on urban development which promotes agricultural production (PADCO/USAID, August 1983/1984). This approach highlights the fact that the urban environment in which development must take place is important. This paper's approach is more geared to regionalized development where geographic, economic and social disparities will have to be studied in order to make projections with respect to the growth pattern of cities. Rural aspect will be considered under a rural development plan.

IV. CONCLUSION

153. This paper has tried to use the current situation in Senegal, Guinea, Burkina Faso, Gabon, the Central African Republic, Rwanda, Tunisia, Zambia, Kenya, Ethiopia, the United Republic of Tanzania, and Lesotho to highlight the extent of spatial disparities in those countries. There are still problems of integration with respect to relationships between urban and rural areas; African planners will have to deal with these problems which are obstacles to development.

154. The inclusion of rural space in any study on physical planning seems to be a must. An attempt has been made to provide some answers which are inevitably general in nature in view of the diversity of the areas reviewed. What is certain is that regardless of the measures taken, States will have to relinquish some of their responsibilities which the populations at large should be allowed to assume under integrated development plans supervised by the decision-makers. This study should be considered as an attempt to propose a well thought out approach and not as a case study.

V. RECOMMENDATIONS

155. The following recommendations will relate to three different levels:

- A. National
- B. Sub-regional
- C. Regional

A. The national level

156. In the 12 countries reviewed in the present study, the urban areas are growing fast and all activities are clearly centred on the capital cities. In the case of Senegal and Burkina Faso, the situation is compounded by unfavourable climatic conditions. There is an acute imbalance between the regions and urban areas are being developed at the expense of the countryside. If this trend continues, it could result in economic strangulation that would block all development efforts.

157. In deciding on what measures to take African countries should concentrate on finding the causes of and the solutions to the disparities by paying special attention to:

(a) The endogenous factors that could be controlled and which could be improved. There is no point in considering uncontrollable exogenous factors such as the weather or the world crisis;

Examining changes in the population situation by highlighting the density of the population by geographic and administrative zones and other indicators of importance;

Examining the level of urbanization and rurality in the various regions;

Assessing the active population in every administrative region;

(b) Studying regional development in order to assess food requirements and rural migration. The purpose of such a study is to have a clearer picture of the disparities between regions. Factors of agricultural development should be considered at this stage;

Studying industrial development to be able to better assess disparities between regions;

Studying the tertiary sector to have a clearer picture of the spatial distribution of the sector's infrastructure, services and activities.

(c) Tilting the distribution of economic factors in favour of rural areas so as to increase rural incomes and reduce the inequalities between urban and rural inhabitants:

Increase the investment budget for the rural areas;

Strengthen agricultural development;

Bring about a better distribution of agricultural activities;

Provide incentives to agricultural producers.

158. Such measures will have to be taken in a coherent manner using the approach proposed in this paper.

B. The sub-regional level

159. The imbalances in a given sub-region are a mere reflection of the situation prevailing in the States. This situation is compounded by major constraints of a political nature, sovereignty and autonomy.

160. In order to stop the deterioration of those sub-spaces organizations such as the Organization for the Development of the Senegal River (OMVS) could be established to carry out development activities. The members of OMVS: Mali, Mauritania, Senegal and perhaps Guinea in the near future, are endeavouring to combat a crisis that neither of them can tackle alone. The OMVS programme includes such sensitive sectors as agriculture, navigation and hydroelectricity. If the planned dams produce the expected results, they will have a beneficial impact on the OMVS regions and countries and will help to reduce their imbalances.

C. The regional level

161. It is harder to make recommendations on correcting disparities for such a wide area as the African region which has so many small States. The region should try to clear the of exogenous factors such as the world crisis over which it has no control, by establishing an integrated economic area the first stage of which should be the co-ordination or confederation of sub-regional organizations, followed by an African common market which will be a priority trading area for some agricultural products whose low world prices account for the imbalances in the region. The Economic Community of West African States (ECOWAS), the Economic Community of Central African States (ECCAS), the Preferential Trade Area for Eastern and Southern African States (PTA) and the Southern Africa Development Co-ordination Conference (SADCC) could help to establish such a common market.

Bibliographie :

- TOURNIER (M) :** L'échelon Régional et la Planification 1970 - Ministère Coopération Française.
- BUGUICOURT (J) :** Dispersités Régionales et Aménagement du Territoire en Afrique - 1971 - A. Colin.
- FALL (B) :** La Restructuration de l'Espace Rural au Sénégal Initiatives Publiques et Réponses Paysannes - Thèse du 3e cycle 1984 Paris I.
- DIAKITE (G) :** L'Aménagement du Territoire en Pays Sahéliens 1970. NEA.
- DIRECTION STATISTIQUE :** Situation Economique du Sénégal 1985.
- GUIEBO (J) :** Politique des Etablissements Humains au Burkina Faso - 1985.
- KOUROUMA (B) :** Expérience guinéenne sur les politiques mises en oeuvre dans le domaine de l'Aménagement du Territoire - 1985.
- MINISTERE DU PLAN ET DE LA COOPERATION DU SENEGAL :** Statistiques et indicateurs des Régions du Sénégal - 1985.
- VIDROVITCH (C) :** Afrique Noire - Permanence et Rupture - 1985 Payot.
- PELISSIER (P) :** Les Paysans du Sénégal - 1966.
- THENEVIN (P) :** Méthodologie de la planification - Ministère Français de la Coopération - 1975.
- ORSTOM/ACA/CCE :** Villes Secondaires et Développement Régional au Sénégal - 1985.
- AGENCY FOR INTER-NATIONAL DEVELOPMENT :** Evaluation du Développement Urbain au Sénégal 1983/1984 - p PADCO.
- BAERINGER (P) DE CARACAS A KINSHASA :** ORSTOM - 1984.

- B.C.M. :** Plan Régional de Développement Intégré du Sénégal (PRDI) 1987
- NUHE/DAT :** Plan National d'Aménagement du Territoire PNAT - Projet PNUD/HABITAT - SEN/77/106 - 1977
- GABON (MPAT/ MEL/MV) :** Planification et gestion des Etablissements Humains dans les Petites Villes, les Villes Moyennes et les Pôles de Croissance au Gabon 1985.
- SERAPHIN KOMARIA-MATOUROU :** Planification des Etablissements Humains en République Centrafricaine 1985.
- KHANTOUCHE NAJET :** Vers l'intégration de la planification des établissements humains à la planification socio-économique 1985.
- BENEDICT M. MATEKA :** Settlements Planning Experience in Lesotho : Historical Analysis - August 1985.
- C. NBAVU :** Subregional and regional Strategies and Programmes for the Development of Human Settlements in Africa: Case of Zambia 1985.
- T.S.G. MAKUNDA:** Human Settlements Planning Methods and Techniques for different environments in Africa The Kenya experience 1985
- ETHIOPIA:** A synopsis of the National State of Human Settlements and on the Environment - February 1987
- Report of the Eastern Subregional Meeting on the International Year of Shelter for the Homeless (10-13 March 1986, Nairobi)
- TANZANIA:** Report of the Eastern Subregional Meeting on the International Year of Shelter for the Homeless (Nairobi, 10-13 March 1986).